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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,348	03/16/2001	Tom Marttila	6009-4601US	7865

7590

11/14/2003

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345 Park Avenue  
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EXAMINER
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HAMILTON, ISAAC N

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 11/14/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/787,348

Applicant(s)

MARTTILA, TOM

Examiner

Isaac N Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7 and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-3,5-7,9,10,18,20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17,19 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The new matter objection is hereby withdrawn.

### ***Claim Rejections - 35 USC § 112***

2. The 35 USC 112 rejection regarding claims 11-14 being dependent on claim 10 is hereby withdrawn.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There are two outer jackets that are in close contact with the core: "a rigid metal outer jacket" and "a refined steel outer jacket". For purposes of examination it is assumed that these outer jackets are the same element, and the element name should be changed to the same name.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 19, 14 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch et al. (4,647,358), hereafter Bartsch, in view of Willingham (3,648,757).

Regarding claim 19, Bartsch discloses a method for making a cathode shown in column 2, lines 31-60. Note cathode in figure 3; steel outer jacket 2; outer jacket is removed from at least one end in column 2, line 49-50; highly conductive inner core 3. Bartsch does not disclose a method of joining the parts of the bar by casting. However, Willingham teaches a method of attaching the core, which is the metal being poured, to jacket 16 by casting it in molten form as shown in figure 4. It would have been obvious to provide a method of fixedly attaching the core to the jacket by casting it in molten form in Bartsch as taught by Willingham in order to mold the core to jackets of varying shapes and sizes. Regarding claim 14, note that the jacket is held in a vertical position with the bottom end closed in Willingham.

Regarding claim 22, note copper core 3 in Bartsch.

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Willingham as applied to claims 19, 14 and 22 above, and further in view of Balthazar et al. (3,780,555), hereafter Balthazar. The combination discloses everything as noted above, but does not disclose a method of preheating the outer jacket. However, Balthazar teaches a method of preheating the outer jacket in column 4, lines 42-44. It would have been obvious to provide a method of preheating the outer jacket in the combination as taught by Balthazar in order to cool the molten core at a controlled pace. It is inherent that the core is preheated because the core is in the form of molten metal.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Willingham as applied to claims 19, 14 and 22 above, and further in view of Yamada et al. (JP

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01180718 A), hereafter Yamada. The combination teaches everything as noted above, but does not teach a method of heating the outer jacket and the core after bonding. However, Yamada teaches a method of heating the outer jacket and the core after bonding in figure 5, elements 4 and 5. It would have been obvious to provide a method of heating the outer jacket and the core after bonding in the combination as taught by Yamada in order to contract the outer jacket to the entire length of the inner tube.

9. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Willingham as applied to claims 19, 14 and 22 above, and further in view of Beetle (4,807,688). The combination teaches everything as noted above, but does not teach a method of immersing an outer jacket, with holes in the upper part, into a melt of a core material essentially in a horizontal position. However, Beetle teaches a method of immersing an outer jacket 10, with holes 40 in the upper part, into a melt of a core material 60 essentially in a horizontal position in figure 5. It would have been obvious to provide a method of immersing an outer jacket, with holes in the upper part, into a melt of a core material essentially in a horizontal position in the combination as taught by Beetle in order to take advantage of the metallostatic pressure head to fill the jacket with molten metal, thus eliminating the cost for any pouring equipment. Note column 2, lines 18-37.

10. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Willingham as applied to claims 19, 14 and 22 above, and further in view of Dwivedi (5,005,631). The combination teaches everything as noted above, but does not teach a method of immersing an outer jacket into a melt of core material in a vertical position wherein the bottom of the jacket is closed. However, Dwivedi teaches a method of immersing an outer jacket into a

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melt of core metal in a vertical position wherein the bottom of the jacket is closed. It would have been obvious to provide a method of immersing an outer jacket into a melt of core metal in a vertical position wherein the bottom of the jacket is closed in the combination as taught by Dwivedi in order to fill the volume of the jacket and eliminating the cost of any equipment needed to rotate the outer jacket.

### ***Response to Arguments***

Applicant's arguments filed 8-28-2003 have been fully considered but they are not persuasive. Applicant asserts that the combination of Bartsch and Willingham does not teach a core that is fixedly attached to the jacket. It is believed that the combination does teach the core and jacket are fixedly attached. The applicant appears to allude to this fact in his very statements of Paper No. 11, filed 8-28-2003. Applicant states on page 9, last paragraph, that the molten metal that is poured in figure 4 is "temporarily held" in place by the form/mold. The term "fixedly" is defined in Merriam-Webster's Tenth Edition Collegiate Dictionary as "securely placed or fastened." The fact that the jacket 16 is removed in Willingham is irrelevant with respect to the term "fixedly" if at one point the jacket 16 is fastened to the core. Moreover, fasteners in the form of screws 17 are used to temporarily hold and fixedly attach the jacket 16 to the core. In response to applicant's argument that Bartsch and Willingham are directed to nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case,

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Bartsch and Willingham are both teaching a method of fastening a jacket to a core, however, Willingham is using casting. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, if an outer jacket in Bartsch is smaller than a core, then there is no way to fit the core into the jacket without further machining and manipulating the core. However, by casting the core into the jacket, a one-step casting process is required, opposed to a two-step machining process for the core. Therefore, it would have been obvious to provide a method of fixedly attaching the core to the jacket by casting it in molten form in Bartsch as taught by Willingham in order to mold the core to jackets of varying shapes and sizes.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac Hamilton whose telephone number is 703-305-4949. The examiner can normally be reached on Monday thru Friday between 8am and 5pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082.

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In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9302.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is 703-308-1148.

*J/A*

IH

November 6, 2003

*all*

Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700